NAGALAND

REPORT OF A STUDY TEAM

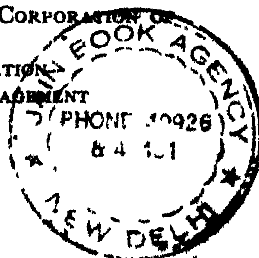
INDUSTRIAL POTENTIAL SURVEY

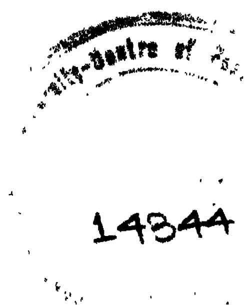
NAGALAND

REPORT OF A STUDY TEAM

SPONSORED BY

THE INDUSTRIAL DEVELOPMENT BANK OF INDIA
THE RESERVE BANK OF INDIA
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FOREWORD

Regional balance or reduction in the disparities with regard to the level and the rate of development amongst the different regions has been all along one of the principal objectives of planned development in India. However, since this objective was attained only to a very limited extent during the first three Five Year Plans, a new and a different approach has been initiated since 1968 for the attainment of this objective. The primary responsibility for this purpose would be that of the Government--both Central and State ; however, the financial institutions are expected to play a catalytic role in promoting regionally balanced development.

The initial task of identifying industrially backward areas was first taken up in 1968. For this purpose, the Government of India appointed a committee under the chairmanship of Shri B. D. Pande. This Committee identified in 1969 the following as backward States/Union Territories : Andhra Pradesh, Assam, Bihar, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Nagaland, Orissa, Rajasthan and Uttar Pradesh and all Union Territories except Delhi and Chandigarh. The Government of India also appointed another committee under the chairmanship of Shri N. N. Wanchoo to suggest fiscal and financial incentives for promoting industrial development of backward areas ; this Committee recommended in 1969 selection of two or three districts in each backward State for special incentives. Further, the National Development Council decided in 1969 that two districts in each of the backward States/Union Territories and one district in other States/Union Territories should be given special concessional assistance by the Central Government for industrial development. This assistance is to take the form of a subsidy equivalent to one-tenth of the fixed capital investment in new projects or for expansion of existing projects, provided the total fixed capital investment requirement did not exceed Rs. 50 lakhs. Assistance to projects with capital cost exceeding Rs. 50 lakhs may be considered on merits. The districts eligible for this assistance have already been notified by the Government of India.

Further, the Planning Commission in consultation with the State Governments and financial institutions has also prepared a list of over 200 districts spread over various States and Union Territories except Chandigarh and Delhi; industrial units in these districts would be eligible for assistance on concessional terms from the financial institutions. The all-India term-financing institutions *viz.*, the Industrial Development Bank of India (IDBI), the Industrial Finance Corporation of India (IFCI) and the Industrial

Credit and Investment Corporation of India Ltd. (ICICI) have already announced schemes of financial assistance on concessional terms for industrial development in these districts. The concessions relate to rate of interest, period for initial moratorium and for repayment of the loan, rate of underwriting commission and commitment charges, requirements with regard to promoter's contribution and contribution to risk capital by financial institutions. These financial institutions would also meet initially the cost of consultancy services in deserving cases with regard to the preparation of feasibility reports, subject to reimbursement later by the promoters. All these concessions are generally available for projects with a capital cost not exceeding Rs. 1 crore. In addition, the IDBI has a scheme of refinance assistance to banks and State Financial Corporations (SFCs) on concessional terms in respect of their loans to small and medium projects in backward areas.

Financial institutions are keenly aware of the limitations of such financial and fiscal incentives in promoting industrial development in backward areas. It is recognised by them that it would be essential to undertake considerable amount of project work for the purpose. This work comprises identification of project ideas, preparation of preliminary feasibility studies, search for managerial/entrepreneurial talents, preparation of detailed project reports, managerial, technical and financial assistance for project implementation, critical evaluation of projects from the national point of view, and finally project supervision.

Accordingly, these institutions initiated surveys of backward States in 1970 for the purpose of identifying specific project ideas in the light of the natural and other resources, demand conditions and infra-structure facilities over a period of next 5 to 10 years. These surveys are carried out by Study Teams under the supervision and guidance of a Committee of Direction comprising senior officers of the IDBI, the IFCI, the ICICI, the Reserve Bank of India (RBI), the Agricultural Refinance Corporation (ARC) and the Government of India. The Study Team comprises mostly officers of participating financial institutions and the concerned lead banks and State-level financial institutions. So far, these surveys have been completed for Arunachal Pradesh, Assam, Bihar, Jammu & Kashmir, Himachal Pradesh, Madhya Pradesh, Manipur, Nagaland, Orissa, Rajasthan, Tripura, Uttar Pradesh, Pondicherry, Goa, Daman & Diu, Dadra & Nagar Haveli and Andhra Pradesh. The survey reports on Bihar, Assam, Tripura, Arunachal Pradesh, Jammu & Kashmir, Rajasthan, Manipur and Orissa have already been finanalised and printed. This report on Nagaland is the eighth to be printed in this series.

The survey report of each State/Union Territory is to be discussed with the concerned officials/representatives of the State Government/State-level financial institutions and other industrial interests for the selection of project ideas that seem *prima facie* viable. Such discussions have already taken place in Assam, Jammu & Kashmir, Bihar, Orissa, Uttar Pradesh and Tripura.

The next step in the process is to arrange for the preliminary feasibility reports with regard to the projects that have been identified by the Study Teams. These reports are expected to provide enough material for taking a *prima facie* decision by a promoter with regard to a project. The financial institutions will prepare such reports, either on their own or with the assistance of technical consultancy services; the financial institutions have prepared a list of available consultancy services in the country for the purpose.

The search for potential entrepreneurs who can undertake these projects is another crucial step. Once an entrepreneur is found it would be necessary to have a detailed project report prepared by technical consultancy services to facilitate sound evaluation and selection of a project. It would then be the responsibility of financial institutions to provide adequate technical, managerial and financial assistance for the implementation of the project as also to keep a close watch on the process of implementation.

To facilitate the work relating to these various facets of the project cycle as also to undertake the task of identifying project ideas on a continuing basis, the idea of an Inter-Institutional Group at State-level has been suggested. This Group would comprise the all-India term-financing institutions, the State-level institutions like the SFC, the State Industrial Development Corporation (SIDC) and the concerned lead banks. Such Inter-Institutional Groups have already been formed in Kerala, Andhra Pradesh, Jammu & Kashmir, Assam, Bihar, Mysore, West Bengal, Orissa and Uttar Pradesh. They will be formed in the other States in the next few months. In Kerala, the Inter-Institutional Group has sponsored a Technical Consultancy Service Centre for assisting it with regard to the various aspects of project work. The IDBI has taken the initiative in establishing this Centre which has been called the Kerala Industrial & Technical Consultancy Organisation Limited (KITCO). The idea of establishing such Technical Consultancy Service Centres in other backward States/Union Territories was discussed in the Workshop Seminars organised by IDBI in Andhra Pradesh, Assam, Bihar, Jammu & Kashmir, Orissa, Uttar Pradesh and West Bengal and the proposal received overwhelming support from all the participants.

These seminars also discussed the need for (*a*) entrepreneurial/managerial training programmes appropriate for the nature of potential entrepreneurs/managers in a concerned State, (*b*) continuous studies of assisted projects preferably by a centre established by a university in the State, (*c*) a development centre in each district to serve as a nucleus for the provision of credit/technical/marketing assistance to small farmers and small entrepreneurs, and (*d*) provision of managerial and technical assistance by industrial houses and financial institutions for such district development programmes which can have a wide pervasive impact, on living standards, nutrition, employment and incomes in a given district.

The views expressed and comments offered in this report by the members of the Study Team are in their individual capacities. Hence, neither the institutions which have sponsored this survey nor the Committee of Direction which has guided the survey work are responsible for the comments/views in the report. The report is printed solely with a view to giving wider publicity to the Team's findings and to stimulate further discussion and concrete action with regard to the industrial development of backward areas.

This survey was conducted by a Team comprising Sarvashri R. K. Patil (NIBM), S. V. Shah (ICICI), A. K. Roy (SBI), M. K. Sasy and S. K. Chakrabarti (IDBI), H. C. Sharma (IFCI), S. Bandyopadhyay (IFD, RBI) and B. N. Mandal (ARC). The Committee places on record its high sense of appreciation of the work done by the members of the Study Team for Nagaland. The Committee is grateful to the financial institutions, the Government of Nagaland and other official and non-official agencies/individuals for their valuable assistance to the members of the Study Team.

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Bombay,
November 1972.

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PREFACE

The study on Nagaland is one among the series initiated by the Industrial Development Bank of India, jointly with other financial institutions—the Industrial Credit and Investment Corporation of India Limited, the Industrial Finance Corporation of India and the Agricultural Refinance Corporation—and the Reserve Bank. Representatives of the National Institute of Bank Management and the State Bank of India, the Lead Bank in Nagaland, were also on the Study Team. The task before the Team was to identify certain project ideas which could advantageously be developed for implementation during the next five to ten years.

Nagaland is a small State in the north-eastern region, with a population of about five lakhs. For historical and geographical reasons, the area has remained isolated and consequently underdeveloped. As in the case of similar backward areas, sufficient reliable statistics are not available on resources potential and other economic indicators. The primitive method of agriculture—shifting cultivation—has not left much forest resources for commercial exploitation. The State has little mineral resources worth economic exploitation. The limited financial, material and human resources do not permit a large-scale industrial programme at the present juncture. To meet the aspirations of the people of Nagaland, the Government has already undertaken two major projects—a sugar mill and a paper mill—based on local raw materials. These are really ambitious programmes as the State has to organise a large-scale cane cultivation and arrange for sufficient supply of pulpable material at reasonable cost. But it goes to the credit of the State Government which is striving its best to increase the supply of both these raw materials for which the State's land resources are eminently suited. The immediate problem before the State and also the all-India financial agencies is to see that these two projects costing about Rs. 30 crores are commissioned at an early date. In view of the size and importance of these projects, the all-India financial institutions may have to take an active interest in their implementation. There is also scope for small-scale industries, especially in the Dimapur area, for producing light engineering goods.

The Study Team had been greatly benefited from the discussions it had with various government officials, bankers, leading citizens, etc. Our thanks are due to each one of them for their assistance and help ; their number is too large for individual acknowledgements to be made. Special mention may, however,

be made of Shri H. Zopianga, Development Commissioner, Shri I. Sasimeren Aier, Secretary (Industries) and Dr. Sadgopal, Director of Industries.

Our thanks are also due to Shri P. Pongener, Assistant Director of Industries, who accompanied the Team throughout its tour of Nagaland.

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CHAPTER I

BACKGROUND

General

Nagaland was constituted as the sixteenth State of the Indian Union on 1st December 1964. It has an area of about 16,488sq. kilometres between 25°6′ and 27°4′ north of equator and between the longitudinal lines 93°20′E and 95°15′E. The State is bounded by Assam in the north and west, by Burma and NEFA in the east and Manipur in the south. The topography is rolling and at some places severe—full of hill ranges which break into a wide chaos of spurs and ridges. The altitudes vary between 914 metres and 3048 metres. The State is pear shaped, lying at about an angle of 45°, with its narrow end towards the south-western district of Kohima. The hills in Kohima district have steeper inclines while those in Mokokchung are gentle. In Tuensang, they are steeper towards the east. The Doiang and Dikho rivers, both tributaries of Brahmaputra, are navigable for a few miles within the State. The other important rivers are Jhanzi and Disai which flow north-eastward into the Sibsagar plains. The river Tizu with its tributary Lanier flows south-east to join the Chindwin in Burma.

The summer temperatures range from 15°C to 40°C. In winter the fall in temperature is considerable, but in the inhabited areas snowfall is very rare. Annual rainfall averages between 180 cms. and 250 cms. and is spread over April to October.

Administratively, the State is divided into three districts, *viz.*, Kohima, Mokokchung and Tuensang. The State headquarters are at Kohima. A line could be drawn dividing the State equally into western half and eastern half from the point of view of development. While the western half is economically more advanced, the eastern half suffers from lack of communications, due perhaps to the steeper mountains, which, in a large measure, explains the economic backwardness. Tuensang district, which covers most of the eastern half, is the most backward district in the State.

Population Characteristics

According to the 1971 census, the State has a population of 5,15,561. The average density is 31 per sq. km. District-wise details of the population are given in *Table* 1. Among the States, Nagaland recorded the highest population growth of 39.6 per cent during 1961-71 (all-India 24.6 per cent).

While all the people of Nagaland are generally called Nagas, there are many sub-tribes with their own distinct languages and cultural features. The major tribes under the generic name 'Naga' inhabiting the various districts are as follows :

District	*Tribes*
Kohima:	Angami, Chakesang, Zeliang, Sema, Rengma, Khezha, Chaku and Kuki.
Mokokchung:	Ao, Lotha and Sema.
Tuensang:	Konyak, Chang, Khien Menga, Phom, Changi, Sangtam and Yimchungre.

According to the 1961 census, Aos are the largest tribe followed by the Konyaks, the Semas and the Angamis. Different tribes have their own specific areas of residence.

It is worth noting that the different tribes are at different stages of economic development. The Angamis and Chakesangs practice terraced cultivation and double cropping. The other tribes have not emulated their example, although the terrain occupied by them is no more difficult for constructing terraces than the Angami terrain. Thus, while some of the tribes have achieved some degree of technological advance in their way of life, others continue their primitive methods, eking out a bare existence. The activities of Christian missionaries and the consequent spread of education have created some oases of western civilization where modern ways of living are observed.

Population Density

The overall density of the territory works out to 31 persons per sq. km. Mokokchung district has the highest density—44 persons per sq. km., followed by Tuensang and Kohima with densities of 31 and 24 persons per sq. km. respectively.

Three centres *viz.*, Kohima, Mokokchung and Dimapur, have been classified as urban centres in the 1971 census. The population of these towns totals 51,071 (9.9 per cent of the State population).

The 1961 census enumerated 814 inhabited and 14 uninhabited villages. The number of such villages during 1971 is not yet available. Most of the villages are situated on high altitudes, 1,000 to 1,500 metres high, as it is typical of Nagas to locate houses on hilltops and at higher elevations. Some of the villages in Nagaland are quite large with population ranging between 5,000 to 10,000.

Literacy

For an otherwise backward State, Nagaland has a fairly high rate of literacy. Literacy rate now is 27.3 per cent, which compares favourably with some other States in India (all-India average for literacy is 29.4 per cent). The highest rate of literacy is in Mokokchung district (38.8 per cent). The low rate in Tuensang district at 12.8 per cent indicates the general backwardness of the people living there.

It appears that most of the persons have received only general education. The number of persons having technical education is not available, but it is evidently negligible.

Participation Rate

Being a primitive economy, participation rate in economic activities is quite high. The primitive technology of agriculture and cottage industries compels every able-bodied person above the age of 10/12 years to work for a livelihood. For the State, the participation rate works out at 52.1 per cent. District-wise, the highest rate is recorded in Tuensang district (56.3 per cent) and the lowest in Mokokchung (47.7 per cent).

Out of the working population of nearly 2,69,000 about 2,10,000 are cultivators (78 per cent). The agricultural labourers form a very small percentage (1.4 per cent) of the working population. (*Table* 2).

Details about the labour force engaged in non-agricultural activities are not available. But most of them seem to be in government service, trade, commerce, transport and construction work; others are engaged in miscellaneous services.

Physical Resources

The State has limited natural resources. Reserved forests constitute 1.9 per cent (30,673 hectares) and protected forests 3.1 per cent (51,799 hectares) of the total area. About 2,07,000 hectares or 12.6 per cent of the area is covered with village or community forests over which the Government has very little control. Because of the shifting cultivation, forests have been cleared in most of the areas. The virgin forests are confined mainly to the uninhabited and inaccessible high mountainous regions. In the remaining areas, only secondary vegetative growth (a result of repeated jhumming) consisting of grasses, reeds and fast growing broad-leaved trees is seen. Patches of bamboo forests are seen in Mokokchung and Kohima districts. Bhutang and Khagra, two types of fast growing reeds (which being long fibred are considered good pulping material) are also available in the jhumlands of these

districts. Based on bamboo and these reeds, a paper and pulp factory with a capacity of 100 tonnes per day is being established at Tuli in Mokokchung district. Details of this project have been discussed in *Chapter IV*. The only other forest areas which offer scope for some economic exploitation are Namsa-Tijit in Tuensang district and Rang Pahar in Kohima.

Agriculture is at a primitive stage. There is no agricultural surplus. In fact, the State imports rice from Manipur. There is, however, scope for increasing agricultural production provided improved technology, including permanent terraced cultivation and use of improved seeds and fertilisers is adopted. The soil in Dimapur area is found to be good for cultivation of sugar-cane. More area is being brought under this crop for feeding a sugar mill which is now being established.

The climate and soil are stated to be good for horticulture, especially for the tropical and sub-tropical types of fruits such as pineapples and oranges.

There is good scope for development of sericulture also. To encourage the people to take to this subsidiary occupation, the State Government has established a few sericulture demonstration farms. The intention is to supply silk worms, implements and technical know-how for rearing and reeling to the villagers residing near these farms. The scheme is still in the initial stages and efforts in this regard are yet to make an impression on the economic activities of the people.

The climatic conditions and food habits of the people are suitable for the development of livestock industry. A real beginning is, however, yet to be made to rear the animals scientifically to have the best results. There is also no system of utilising the animal wastes such as leather and bones for industrial purposes.

Industrial skills apart from those required for producing traditional household items are non-existent among the Nagas. Even fly shuttle looms are yet to replace the loin looms. A few small-scale manufacturing units, which have been established in the industrial area near Dimapur, import their labour force from outside Nagaland. The most disturbing feature is the absentee-ownership of industries and even of trade. Although the licences for running the small factories and shops are in the names of local Nagas, the actual management, including the provision of finance, is in the hands of outsiders. Generally, contracts for building roads and Government houses are given to Nagas but, in practice, the work is executed by non-Nagas. The policy of the State Government is to encourage the local people in taking up the above type of vocations.

The known mineral resources of Nagaland are not significant. However, mention may be made of Nazira coal fields. Coal was being mined from these fields at Borjan (at a distance of about 6.5 to 8 kms. from the Naganimara railway station) till 1965 when the mines were closed by the lessee reportedly for administrative and financial reasons. The State Government is trying to reopen the mines.

Limestone deposits have recently been established at Kiphrey sub-division of Tuensang district. Further investigations are being made to establish their quantity and quality. The inaccessibility of the area may, however, make the exploitation uneconomic.

Financial Resources

Information on State income is not compiled. In fact, reliable statistics on any aspect of the economy are not readily available. This is a great handicap for outlining a development programme.

The expenditure on revenue account is estimated at Rs. 34.6 crores in 1971-72 and the plan expenditure at Rs. 8.4 crores. The State revenue from local taxation is estimated at Rs. 41.7 lakhs. Further, the State will obtain Rs. 67.8 lakhs as its share of income-tax and excise duties; its gross administrative receipts (including the fares, freights etc. collected by the State Transport) would amount to Rs. 1.4 crores.

It may be noted that the general conditions in the State are such as to provide a very small tax base. However, the money that flows from the rest of the country, if properly harnessed, could initiate a moderate programme of agricultural and industrial development.

The commercial banks have started their operations in this State recently. The State Bank of India has four branches and Allahabad Bank has one branch in the State. The deposits with commercial banks totalled Rs. 1.75 crores in March 1971. The scope for deposit mobilisation is quite good as Nagas have accumulated considerable wealth through construction contracts.

Human Resources

The size and socio-cultural attributes of the population would indicate scarcity of labour for skilled and unskilled jobs. The State, however, has the problem of educated unemployment in some measure. Technical skills are absent in the local population. The Inner Line Regulation and the law and order situation in the State effectively prevent inflow of labour from outside the State. The Inner Line Regulations are a relic from the British heritage. Under these, the entry into the Naga Hills (as the State was origi-

nally known) was controlled keeping the security angle in mind. These are still in force except in a small area in and around Dimapur town. The two large industrial projects which the State has taken for implementation may necessitate induction of outsiders in the State. As noted earlier, a few small-scale industrial units which have come up near about Dimapur, import their labour force from outside Nagaland.

CHAPTER II

INFRA-STRUCTURE FACILITIES

Transport

Railways : Nagaland has a short length of railway—about 8 kms. The railway connecting Gauhati with Dibrugarh runs parallel to the western boundary of the State. Dimapur, which is a railway station within Nagaland on this section, is at a distance of about 322 kms. from Gauhati and 161 kms. from Jorhat. It is also the railhead for Manipur. A minor railway station in the State is at Naganimara in Tuensang district on a branch line which is linked with the Jorhat-Dibrugarh section. In view of the severe topography of the State and the limited traffic, it may not be feasible to extend the railway network in the near future.

Air : Nagaland had no direct air link with the rest of the country till recently. Imphal in Manipur (129 kms. south of Kohima) and Jorhat in Assam (177 kms. west of Kohima) were so far serving as the air links to the State. However, Dimapur has now been put on the air map with a weekly service of the Indian Airlines linking Dimapur with Gauhati and Calcutta.

Roads : In view of the topographical features of the State, roads are the single most important form of transport. The road system in the State is fortunately not bad, although much more remains to be done. The National Highway No. 39 passes through the southern part of the State linking Dimapur with Kohima and on to Imphal in Manipur. Dimapur's link with the railway and the National Highway has made it an important commercial centre which handles the entire import and export trade of western Nagaland and Manipur.

The following roads also connect different parts of the State with the various railheads in the plains of Assam :

(*i*) Wokha town with railhead at Furkating by a kutcha road.

(*ii*) Mokokchung town with railhead at Amguri by a surfaced road which passes through Tuli, the site for the proposed paper and pulp plant.

(*iii*) Mokokchung town with railhead at Mariani by a road constructed by the Border Roads Organisation.

(*iv*) Mon town in the north-eastern part of the State with the railhead at Bhojo by a kutcha road.

A fairly good arterial road system has been built up in the

western half of the State. Thus, Mokokchung has been connected with Kohima with two roads—one a State Highway via Wokha and the other a motorable road via Zunheboto and Satakha.

A road links Tuensang with Mokokchung. This road is now being maintained by the Border Roads Organisation.

In the south, a motorable road extends from Kohima to Phek. It passes through Pfutsoro and Chizami, two important centres in the more progressive areas of the Chakesang tribe.

The length of jeepable roads (lineal) is about 3,396 kms. The ratio of roads to surface area works out to one km. for about 5 sq. kms., which is a satisafctory ratio considering the topography. One feature of the road development in Nagaland is, however, worth noting. While the western half of the State has generally good road communications, the eastern half has few road links. Sparse population coupled with difficult hilly terrain as compared to west has retarded the transport development in this area. However, the need to connect various parts of this area still remains, particularly as this area has good virgin forests, which could be utilised for the development of industries.

Power

The State draws power from the Assam grid and till the end of March 1970, 23 places including Tuli, Mokokchung, Changki, Dimapur and Kohima, were supplied with power from this system. Some more centres were expected to be linked with this power supply but the details are not available. Some areas have been electrified with diesel generating sets. However, diesel based electric power is generally uneconomic and cannot be depended upon for any industrial programme, large or small. During 1969-70 the electricity consumption was 2.4 million kwh.

The projected generation and consumption of electricity as at the end of the 4th Plan *i.e.*, 1973-74 are 9.5 million kwh and 8.0 million kwh respectively. The low density, scattered village locations, difficult terrain and absence of any appreciable industrial load have made electrification a heavily subsidised welfare proposition in Nagaland. Commercial sales (mostly for domestic lighting) bring very little revenue.

The State has proposals for a few micro-hydel projects. Preliminary investigation on one major hydel scheme *viz.*, Doyang Hydel Project is expected to be taken up shortly. The schemes are yet to be approved by the Central Water & Power Commission.

With the establishment of two major industrial units, the sugar mill complex at Dimapur and the paper mill at Tuli, and other small industrial units, the State's requirement of power would go

up. Nagaland will, therefore, have to find power in adequate quantity and at a reasonable rate. The present rate for industrial power at 20 paise per unit at Dimapur is high. Availability of power does not appear to pose a problem as the north-eastern regional grid to which Nagaland belongs has surplus capacity. However, the availability of power at a reasonably cheap rate may require careful planning to keep the cost of generation and transmission low.

Government's Role

The character and functioning of Government in Nagaland is somewhat different from that in other parts of the country. The transition of the Naga Hills from certain loosely administered areas to its present Statehood has taken time. The general backwardness of the State and its socio-economic and political implications have imposed on the Government the onerous responsibility of making quick strides. This, coupled with the absence of private entrepreneurship (which again, to some extent, is due to the Inner Line and licensing restrictions), has compelled the State Government to take initiative in every matter. This has resulted in its taking a liberal attitude in respect of grants and subsidies for the development projects.

The State Government has not formulated its industrial policy. The need for such a policy would arise if outside entrepreneurial talents are to be induced for quickening the pace of industrialisation of the State. Financial assistance in the shape of industrial loans is available from Government to a maximum of Rs. 20,000 at an effective rate of interest of 4½% per annum. Recovery is effected in five annual instalments after a moratorium of one year. The Government generally grants subsidy to the extent of 25% towards purchase of equipment and raw material. The subsidy for raw material is continued on being satisfied on the proper utilisation of past loans and subsidies. The Government is at present more prone to giving grants-in-aid than industrial loans. This may be the result of the past experience in loan recovery. The total loans granted by the Government upto March 1971 amounted to Rs. 18.8 lakhs to 178 units. The system of follow-up of the loans to ensure their proper utilistation and prompt repayment needs to be strengthened. As it is, these loans are not always used for setting up industries.

In order to protect tribal interest, the Government has a policy of giving licences only to tribals, be it for setting up of an industry, for running a shop or for constructing road or building. Though this policy is supposedly in the interest of the tribal people, it is

likely to boomerang for the simple reason that the tribal concerned transfers the benefit of the licence to an outsider and thus becomes an absentee-owner. In fact, this has happened in quite a number of cases in the State and at a few centres in NEFA and this policy has created a new tribal rentier class which would be very difficult to dislodge at a later stage. It would be far better to allow non-tribal businessmen to negotiate for the land rents directly with the tribals under the supervision of Government officials, if necessary. A still better policy would be to provide management assistance to tribals for running their own business or to allow partnership between non-tribals and tribals.

The State's industrial organization consists of District Industries Officers at Mokokchung and Tuensang with the Director of Industries and the Secretary (Industries) as the co-ordinating agency at Kohima. The present efforts of the Industries Department are mainly in the direction of supporting the existing handicrafts at the same level of technology. The Department has established a few sericulture demonstration farms where know-how for silkworm rearing and reeling equipment are supplied to the villagers willing to take up this subsidiary occupation. The peoples' response to this project is yet to be assessed.

The element of subsidy, grants-in-aid and low rate of interest have created an atmosphere of soft loans in the minds of the people. Formulation of a clear industrial policy by the State Government would not only benefit the would-be entrepreneurs, but also help the financial institutions in assessing the viability of new proposals.

Credit Institutions

The State is at present served by four offices of the State Bank of India and one office of the Allahabad Bank. The oldest bank office is that of the State Bank of India at Dimapur. Dimapur has two offices (State Bank of India and Allahabad Bank), while Kohima, Mokokchung and Tuensang have one office each of the State Bank of India. The State Bank of India is the "lead bank" in the State and holds licences to open an office each at Wokha, Zunheboto and Mon.

Very few advances have been reported except at Dimapur where there is some industrial and trading activity. Though details are not available, a significant amount has been advanced to small transport operators by the two banks at Dimapur. At other centres, lack of industries and entrepreneurship has primarily stood in the way of expansion of advances operations. Another important factor which has blocked the flow of further advances to the existing industries, particularly at Dimapur, is the anoma-

lous position about the ownership of the units. While a Naga is the legal owner of the unit, it is known to everybody that the industry is financed and managed by an outsider with the assistance of outside labour. In such a situation, it becomes difficult for a bank to consider applications for enhancement of credit facilities, particularly of a clean type.

There are other factors also which have stood in the way of greater flow of credit to small and cottage industries. The offices of the State Bank of India are busy with the treasury work and other banking transactions and very little attention is paid to development work such as finding out prospective entrepreneurs. Ordinarily, the banks are content with the proposals that come in. Even here, there is generally a considerable time lag in taking decisions. This not only saps the energy of the entrepreneurs but also creates an adverse image about the commercial banks in the minds of the public.

In the context of conditions prevailing in Nagaland, the banks particularly the State Bank with its small network of branches in the State, will necessarily have to play a leading role in the development of the State. First, they should try to mop up the extra money that is lying with the contractors and others. An intensive drive for deposit mobilisation will have to be launched. It will not be an easy task. The people have not yet developed the banking habit. Again, there is an unusually good market for moneylending. It came to the notice of the Study Team that large sums of money are borrowed and lent at rates of interest as high as five per cent *per month*. It requires a study both by the banks and the Government as to how such heavy interest could be paid by the borrowers, who are generally contractors. Apparently, the contractors have a sufficiently high margin of profit, to enable them to pay such high rates of interest. A careful study by the Government will not only curb this unhealthy market in money but also considerably reduce Government expenditure on each project thereby enabling it to undertake further projects within the same amount of expenditure. The banks' entry in this business may bring down the usurious rates of interest.

Secondly, the banks will have to take an active interest in the development of managerial talents within the State. They will have to develop a cadre of field officers trained in credit analysis, appraisal and supervision. The range of subjects to be covered would be wide enough, from local crafts to modern small industries and, perhaps, even agriculture and horticulture in areas where the State Co-operative Bank is not functioning. The Study Team suggests a two-pronged drive to solve this problem. First, the

Government should allow outsiders to set up business units preferably with active collaboration of the educated tribal youth. This would give an opportunity to tribals of learning management techniques at the grassroot level at low costs. Second, the banks should establish an entrepreneurial development cell.

The banks would be the only agency ideally suited, taking into account the banker-client relationships, for giving management assistance. The field officers should be suitably trained, so that they can counsel the clients on their difficulties. It is only when these steps have been taken, that a locally viable base for entrepreneurship would be created. Entry of outside entrepreneurs suggested elsewhere would also set examples for emulation to the tribals.

The Study Team also recommends that the Government should cease its loan operations for agriculturists and small entrepreneurs in areas where the co-operative and commercial banks are functioning. If the Government feels that the terms and conditions of loans offered by the banks are too conservative in the context of socio-economic conditions of the concerned areas, it would be open to the Government to channelise its concessions through the banks. This recommendation is made with two objectives in view: (*i*) It is not desirable to have a parallel agency for agricultural and industrial finance offering softer terms, but with limited funds, functioning side by side with a branch of the bank. This creates a feeling of discrimination. (*ii*) The past records of the Government's loaning activities show that the viability aspects of the loan proposals have not been studied properly and the end use of the loans has not been ensured by follow-up actions. If the same state of affairs continues, the banks will also face difficulties in respect of new clients.

The proposals made above would strengthen the banks' operations. However, they presuppose the existence of a well-trained and efficient staff at the branch level.

The Study Team further recommends that there should be close co-operation between the Government officials and bank personnel in Nagaland. The former, because of their day-to-day contacts with the tribals, are best suited to counsel on the credit-worthiness of the would-be borrowers. Besides, close working with the Government officials would cut down the administrative costs of the banks. Travel is a big item in the costs in Nagaland. A close co-ordination with the district officials would help the banks in cutting down these costs.

There are no offices of term-lending institutions in the State. At this stage, it would not be desirable to have a separate State

Financial Corporation for this State. The Study Team understands that consultations are afoot for extending the jurisdiction of the Assam Financial Corporation (AFC) to this State also. This should be expedited. The benefit of the IDBI's liberalised schemes of assistance for individual units in backward areas is available to industries in the State. The commercial banks and the AFC should make use of this facility and extend loans at concessional rates to borrowers in Nagaland.

Co-operatives

Finally, a reference may be made to the Co-operative Movement in Nagaland. Co-operatives were introduced in the State only in 1960. The co-operative credit structure in the State is a two-tier one with the Nagaland State Co-operative Bank Ltd. at the apex and primary agricultural credit societies at the base. There are no central co-operative banks in the State.

From 12 co-operative societies in 1962 the number of different types of societies has increased to 294 at the end of March 1971 (*Table* 3). Most of the societies, however, are dormant.

The Nagaland State Co-operative Bank extends short-term and medium-term loans. Out of a credit limit of Rs. 5.0 lakhs sanctioned to it by the Reserve Bank of India in 1970-71, the bank could draw only Rs. 1.3 lakhs during the year. With a view to extending long-term loans to the co-operative societies, the apex bank has opened a land development section. Recently, the Nagaland State Co-operative Bank was sanctioned by the Agricultural Refinance Corporation a long term loan of Rs. 30.0 lakhs for financing the reclamation of 1,200 hectares of forest land for cultivation of sugar-cane by 22 sugar-cane farming societies. The short-term credit needs of the societies will also be met by the apex bank.

In the context of this emerging increase in credit needs, the organizational set up of the apex bank should be geared up so that it can play a pivotal role in the agricultural development of the State.

Marketing Facilities

At present there is hardly any surplus production either of agricultural produce or of handicrafts which could be exported outside Nagaland. Whatever little there is, is marketed through traditional channels. There appears to be enough money with the people to mop up the few items of handicrafts produced under primitive methods and priced high.

This has created a peculiar situation. There is no inclination on the part of the producers to increase production knowing

the limitations of the market. Because of this peculiar situation, there is no incentive for craftsmen to explore outside markets or to reduce costs. If the cottage industries of Nagaland are to come out of the internal market and enjoy the benefits of a wider market in the big cities of the country and abroad, they will have to cut down their cost substantially through improvements in their techniques of production. Marketing organisations can help the local handicrafts industry to locate external markets for Nagaland.

CHAPTER III

AGRICULTURE

Agriculture is the most important economic activity in the State, and yet it is a deficit area so far as foodgrains are concerned. This is partly attributable to the use of primitive methods of cultivation. Shifting cultivation or 'jhumming' is the most common form of cultivation. Only in areas inhabited by Angamis and Chakesangs, some sort of settled cultivation is found. These tribes grow paddy in the terraces cut out on the hilly slopes.

Tenancy and Land holding

There are basically two types of land ownership system in the State. In one, the land belongs to the clan and is cultivated by the members of the clan ; this type of land cannot in any case be sold or transferred. In the second, land is owned by individual families and large holders lease out land for cultivation to those who do not have enough. Land ownership of the second type is transferred by inheritance or purchase. Purchase or transfer of land is allowed only among the inhabitants of the same village and preferably among relatives. A recent Government notification, however, makes it possible to create mortgages on owned lands in favour of credit institutions.

Area and Production

Only about one-fourth of the one lakh hectares of land reported to be under cultivation, is under terraced or permanent cultivation (*Table* 4). The rest is under 'jhums'. Most of the terraced land is in Kohima district. Rice being the staple food in almost the whole of Nagaland, paddy is the most important crop grown. The area under permanent cultivation is wholly under paddy. The total area under paddy, including 'jhum' lands, is estimated at 60,000 hectares. The other major crops grown are maize, pulses, oilseeds and sugar-cane. Potato and chillies are the main vegetables. The foodgrain production in 1970-71 is estimated at 78,000 tonnes against the requirements of the territory at 88,000 tonnes. Foodgrains are now imported from Manipur. With some more efforts and increased use of fertilisers and high-yielding varieties of seeds, it might be possible to produce all the foodgrains needed within the State itself. Presently, both the fertiliser consumption and the use of high yield-

ing variety seeds are low. For example, in 1969-70, the consumption of fertilisers was 85 tonnes (*i.e.*, less than 1 kg/hectare) and the area under high yielding varieties was 120 hectares.

Recently, the Government has initiated cultivation of sugarcane in a large area around Dimapur. This is meant mainly to feed the Khandsari unit and the sugar mill now under construction at Dimapur. Mustard is the main oil-seed grown in Nagaland. Area and production of major crops for the last three years are given in *Table* 5. However, it may be kept in view that the area and production figures given in the table are not based on any land records as the land in Nagaland is not surveyed and there is no primary reporting agency in the State.

Minor Irrigation

Little headway has so far been made in regard to irrigation. With the development of land for permanent cultivation, the necessity of assured water supply for the field is increasingly felt. The irrigated area is about 26,000 hectares which is the total area under permanent cultivation. This area is irrigated mainly through canals cut from high altitude streams. No survey has yet been made to ascertain groundwater potential in the State. The Study Team suggests that exploitation of irrigation potential should be given high priority. The cultivators at present grow only the traditional single crop. With the availability of irrigation facilities, they could have two or three crops.

Assistance to Agriculture

With a view to wean away the cultivators from age-old 'jhum' cultivation to permanent cultivation as quickly as possible, the State provides incentives in the form of cash subsidy at Rs. 740 per hectare for terracing against the estimated average cost of Rs. 3,000 per hectare of terrace construction. In order to make terrace cultivation more attractive, the Study Team feels that there is need for a revision in the subsidy to a higher amount. In the alternative, the State should take upon itself the entire burden of the cost of terracing and then recover the cost over a period of seven to ten years by means of a suitable land improvement tax. If schemes for terrace construction are prepared in concentrated areas, the ARC may be approached for refinance facilities.

The percentage of subsidy given to the cultivators in respect of fertilisers, seeds and tools is 50%. Once the benefits of improved methods of cultivation are realised through increased output, the need for subsidies may diminish and agricultural operation may become self-sufficient and paying.

Loans are also given to the cultivators for agricultural operations. During the last three years a sum of Rs. 3.95 lakhs was advanced to cultivators, as given below :

Name of the district	*Years*			*Total*
	1967-68	*1968-69*	*1969-70*	
	Rs.	Rs.	Rs.	Rs.
Kohima	6,000	45,000	45,000	96,000
Mokokchung	64,000	45,000	45,000	1,54,000
Tuensang	30,000	55,000	60,000	1,45,000
Total	1,00,000	1,45,000	1,50,000	3,95,000

The loans given by the Government are mostly on an *ad hoc* basis and are generally characterized by delays in sanction and disbursement. The existing arrangements for meeting the credit needs of agricultural production are far from adequate and not conducive to the progress of agriculture. Allotment of a sum of Rs. 50,000 per district annually does not even meet the fringe of the requirement. So far as co-operative credit is concerned, the apex bank disbursed Rs. 1.7 lakhs as short-term loans in 1970-71. The total land under cultivation in the State is about one lakh hectares. Calculating the minimum need for credit at the rate of Rs. 125 per hectare, the total short-term credit need works out to Rs. 1.25 crores. As against this, the total amount of short-term accommodation given by the apex bank and the Government during the years 1967-68 to 1969-70 was Rs. 5.7 lakhs only. As the State Bank has opened some branches in Nagaland, the Study Team feels that this bank may be able to meet the requirements of short-term agricultural credit to a great extent.

Horticulture

The State of Nagaland is mainly a hilly tract comprising various agro-climatic regions. It has the potentiality to grow a variety of fruits and vegetables suitable for sub-tropical to temperate climate. The valleys are ideally suited for growing oranges, pineapples, bananas and pears. Local demand for these fruits is not much and the produce cannot find a market outside the territory due to poor transport facilities. With the improvement of road-communications system, there is good scope for development of horticulture in Nagaland. Financial assistance for development of viable plantation and horticultural schemes could be sought from the Agricultural Refinance Corporation.

Animal Husbandry and Poultry Development

The tribals of Nagaland keep livestock mainly for consumption of meat. The livestock mainly consists of cattle, mithuns, pigs and poultry. The methods of rearing, however, are very primitive. The birds maintained by them are not of improved breed. Feeding and management practices are also not on scientific lines. The laying capacity of the birds is very low. There are good potentialities for development of animal husbandry and poultry in Nagaland and viable schemes sponsored by the co-operative sector could be financed by the apex bank under refinance facilities from the Reserve Bank/Agricultural Refinance Corporation. Two poultry farms can be set up in the near future—one at Dimapur and the other at Kohima.

The Study Team feels that there is little scope for institutional finance for agriculture at the existing level of technology. But if viable schemes, prepared in co-operation with the Block Development Agencies, preferably based on the use of modern techniques are presented to the lending institutions, they could be financed for increasing agricultural output. It is suggested that the State Government should encourage the villagers to take up well-designed schemes for terracing and lift irrigation wherever water is available.

CHAPTER IV

INDUSTRIES

Nagaland has practically no organised industry. Lack of infra-structure and entrepreneurial talents, limited physical resources, difficult terrain and restrictions on the entry of outsiders into Nagaland acted as constraints on industrial development. The only centre with some industrial activity in the State is Dimapur (a railhead adjacent to the Assam plains). As the Inner Line Regulations do not apply to Dimapur, a number of small industries have come up with the active technical, managerial and financial assistance from outside. Dimapur, being an entrepot centre for trade and commerce with Manipur and eastern parts of Assam, enjoys a wider market for the locally produced goods. There are a few small-scale manufacturing units and repair shops at this centre. There is also a *khandsari* unit at Dimapur, recently started by the State Government. In the rest of Nagaland, industry is mainly confined to handicrafts. The villagers produce their own requirements of cloth, baskets, furniture, implements, etc., using traditional tools and techniques.

According to the information available with the State Directorate of Industries, at the end of March 1971 there were 470 small and cottage industrial units in the State, of which about 355 were functioning (*Table* 6).

The National Council of Applied Economic Research (NCAER) had suggested an industrial programme for Nagaland for the period 1966-76, involving a total outlay of Rs. 22.5 crores (*Table* 7). In mid sixties the State Government has initiated work on the two major projects suggested by NCAER—a sugar mill and a paper plant. In the small industries sector, Government is setting up a fruit canning factory at Changki where pineapple and oranges are cultivated in a compact area of about 10 sq. kms.

Strategy for Development

With a population of little over 5 lakhs, the State cannot sustain a large demand-based industrial programme. Industries should, therefore, be thought of mostly on the basis of available resources. With no mineral base worth economic exploitation, the industrial development has necessarily to be based on the resources available from agriculture and/or forests.

The Study Team believes that the limited resources—financial, physical and human—do not justify the setting up of any more large or medium sized industries in the next few years except for the two units now under implementation. In the near future, all Government energies will have to be directed to bring these projects to fruition at an early date. The completion of the two units underway will give a fillip to the economy and work as an incentive for further industrial development of the State.

Dimapur presently has a number of small-scale units such as rice and oil mills, furniture making units, tyre retreading units, automobile workshops, etc. This place has the necessary infrastructure to develop into an industrial centre. The proximity to Assam plains is a great help in marketing the products. In addition, Dimapur is outside the Inner Line. Some of the items which are now imported into the State can be manufactured at Dimapur to meet the internal demand. Similarly, at Tuli a few small industrial units can come up around the proposed paper project. In other centres, the existing cottage industries may be consolidated and provided with technical know-how and marketing facilities.

In the absence of sufficient entrepreneurial talent within Nagaland and with the Inner Line Regulations restricting the entry of outsiders, the bulk of the industrial activity will have to be initiated by the Government. In the small-scale sector at least, the Government should remove the restrictions on outsiders setting up industry. In addition, Government should evolve an industrial policy offering incentives and facilities to attract outsider entrepreneurs on the lines of incentives offered by several other States. The local people should be encouraged to closely associate themselves with industrial ventures started by outsiders. This would, in course of time, help develop an entrepreneurial class within Nagaland.

The concessions now offered by the Central Government and the all-India financial institutions should be availed of to the maximum extent possible for the development of industries. The Central Government provides subsidy up to ten per cent of the cost of industrial units to be set up in Kohima and Mokokchung districts (which are the 'selected districts' for this purpose). This subsidy would be generally available to all industrial units with a capital cost up to Rs. 50 lakhs. Concessions offered by the major term-financing institutions include lower rate of interest and longer moratorium and amortisation periods. In deserving cases, the institutions may prepare the feasibility report initially and will recover the cost of the report from the unit only when it reaches profitability stage. Concessions from the term-financing

institutions are availabe for industrial units in any of the three districts of Nagaland, involving a capital cost of up to Rs. 1 crore. In the case of relatively small units, IDBI provides cheap finance and other concessions through refinancing of loans granted by a bank or a state level financial institution. Recently, the Central Government has announced 50 per cent subsidy on transport cost for new industrial units to be set up in certain selected areas, which include Nagaland. The subsidy is to be given for five years in respect of industrial raw materials and finished products. In case of Nagaland and other eastern States/Union Territories, the subsidy is to be given on the transport cost between Siliguri and the site of an industrial unit. Fifty per cent of the transport cost on the movement of steel from Gauhati stockyard to the site of an industrial unit has also been proposed to be subsidised. Existing industrial units in these areas would also be eligible for the proposed subsidy, provided they undertake expansion/diversification scheme aimed at increasing annual production by 25 per cent higher than the average annual output during the last three years. The subsidy in this case would, however, be restricted to 50 per cent of the additional raw materials required and finished goods produced.

In short, the strategy of industrial development in the next 5/10 years should be :

(*i*) to consolidate the efforts begun in the sixties for setting up two large-scale projects ;

(*ii*) to create favourable climate for the development of small industries through the enunciation of clear industrial policy as was done in some other states ; and by making maximum use of the financial facilities provided by commercial banks and other term-lending institutions ;

(*iii*) to modernise the traditional cottage industries by finding out lucrative markets outside the State and finanlly,

(*iv*) to launch training programmes for developing the technical and managerial skills among the local population.

Industrial Programmes

As already mentioned earlier, the State Government has undertaken implementation of some industrial schemes. The details of these schemes together with a few other schemes having scope for development in the near future are discussed below :

Agro-based Industries

The soil and climatic conditions, especially near the foothills, are ideal for the development of horticulture and sugar-cane

plantations. These are the areas which, if fully exploited, could provide raw material for developing agro-based industries. Seizing these opportunities, the State Government decided to establish a sugar-cane based industrial complex at Dimapur and a fruit processing plant at Changki.

Sugar Mill Complex

Sugar-cane cultivation is not new to Nagaland. Limited acreage was under sugar-cane in the Dimapur area for supplying the local needs and for feeding the sugar mill at Kirlaguri (Assam). In 1965 a team of technical experts of the Government of India conducted a survey to study the possibility of growing sugar-cane with a view to establish a sugar factory in Nagaland. The team found an area of about 7,000 hectares of land in and around Dimapur as suitable for sugar-cane cultivation. The Nagaland Government then approached the National Sugar Institute, Kanpur, for technical advice and selection of site for a sugar mill. The Institute's Team identified 5,500 hectares around Dimapur as good for cane cultivation inclusive of 2,100 hectares of Rangapahar Reserved forests. On this basis, it recommended the setting up of a sugar mill with 1,000 tonnes per day crushing capacity at a site six miles away from Dimapur. The average season was determined at 140 days. The annual requirement of sugar-cane for such a plant was estimated at 1,60,000 tonnes, including 20,000 tonnes for seed. Assuming an yield of 45 tonnes/hectare, the total area required for cane cultivation would be 3,600 hectares. It was observed by the Sugar Institute's Team that adequate additional area (about 12,000 hectares) is likely to be available for sugar-cane cultivation in the vicinity to enable expansion of capacity to 2000/2500 tonnes a day in future. According to this Team, a recovery of 9 per cent could be expected.

The capital cost of the first phase of the project (crushing capacity of 1,000 tonnes per day with provision for expansion upto 1,250 tonnes per day) has been estimated at Rs. 370 lakhs as detailed below :

		Rs. lakhs
1.	Sugar cane farm	28.60
2.	Sugar mill	249.90
3.	Distillery	20.00
4.	Project service and facilities	34.94
5.	Project administration	36.56
	Total	370.00

The project includes the establishment of a distillery at an estimated cost of Rs. 20 lakhs. It is expected that about 6,000 tonnes of molasses will be available when the sugar plant reaches its full capacity which can be utilised to manufacture about three lakh gallons of industrial and potable alcohol. Apart from molasses, about 5,000 tonnes of press-mud and bagasse will be obtained as by-products from the sugar mill. Bagasse can be utilised as fuel and press-mud as manure which can be sold to the cane-growers or utilised in the project farm.

The labour requirements of the plant is estimated at 600. Even this limited labour force may not be forthcoming from within Nagaland. Since Dimapur is quite adjacent to the Assam plains and outside the purview of the Inner Line Regulations, it may not be difficult to obtain the necessary labour. Power requirements of about 250 KW would be available from the Assam grid.

The Government accepted the recommendations made by the Sugar Institute's Team and took steps to de-reserve 2,000 hectares from the Rangapahar forest circle for intensive cultivation of sugar-cane. The area would be divided into three portions—675 hectares under the direct management of the mill, 125 hectares for cane nursery under the Department of Agriculture and 1,200 hectares to be handed over to 22 sugar-cane farming co-operative societies for commercial cultivation.

The project authorities have already brought 100 hectares under cultivation. An additional area of about 240 hectares was cleared and reclaimed at a cost of Rs. 2 lakhs in 1969-70. A scheme to provide long-term loans to co-opertaive societies for the purpose of reclamation of forest lands for cane cultivation has been finalised by the Nagaland State Co-operative Bank. The Agricultural Refinance Corporation has already sanctioned refinance of Rs. 30 lakhs to the Co-operative bank against these long-term loans.

As a fore-runner to the project, a khandsari mill of 60 tonnes per day crushing capacity was commissioned at Dimapur in 1967-68 at a total cost of Rs. 8 lakhs. The unit is making use of the sugar-cane available in the area and provides incentives to the development of sugar-cane cultivation by individual farmers and co-operative growers in the area. Similarly, a small experimental distillery has gone into operation within the khandsari mill compound.

The expenditure on the Khandsari project as well as the Sugar Mill Project has so far been met by the Nagaland Government out of the Fourth Plan allocations. The management of

the sugar project has been handed over to the newly established Nagaland Industrial Development Corporation (NIDC) with effect from 1st April 1971. Orders have been placed with M/s. Triveni Engineering Works and M/s. Larsen & Toubro for the supply of machinery.

Although considerable progress has been made in the implementation of this project, a clear picture of the total cost of the project, the means of financing and the management pattern, is yet to emerge.

The Sugar Institute's Team has estimated a cost of Rs. 3.70 crores for setting up the sugar project. However, the project authorities have made certain alterations in the scheme to provide a sugarcane-cum-beet diffuser to be incorporated in the milling tandem. This change as well as the normal price escalation is expected to increase the cost of the project substantially.

Till March 1971, a sum of Rs. 1.4 crores has been spent on the project mostly from the State's budgetary resources. The State Government has agreed to finance upto Rs. 2.5 crores. The balance amount will have to be obtained from other sources including term-lending institutions. The Nagaland Industrial Development Corporation has approached the Industrial Development Bank of India for financial assistance of the order of Rs. one crore, half in equity and half in term loans.

Fruit Preservation Unit

Changki and Bhagti valleys in Kohima district are ideally suited for developing into a horticultural belt. Farmers have experience of growing oranges. About 200 hectares are already under oranges. For processing the locally grown oranges, the State Government has decided to set up a fruit preservation unit at Changki at a cost of Rs. 3.0 lakhs.

Civil construction work has started and orders have been placed for purchase of machinery. However, a small quantity of squash is now produced, for the local market. Because of limited demand, the unit has difficulty in selling even the small quantity of squash which is manufactured.

The Team feels that unless the entire project is put on a commercial footing, no tangible benefits would accrue to the growers, as was envisaged when the initial decision was taken. A market analysis need to be made to identify the potential market for the products. Strengthening the management of the factory both at the technical and administrative level is also essential for making the unit a commercial success. The Study Team is of the opinion that it would be desirable even at this late stage to prepare a detailed

feasibility report with the help of some well-known fruit preservation units in the country and then implement the recommendations expeditiously. If necessary, a tie-up with the reputed companies can also be thought of.

Forest-based Industries

Although the climatic conditions are suitable for developing a good forest estate, shifting cultivation practised for centuries had made reconstruction a difficult and stupendous task. There are few virgin forests now left in the State and they too are confined mainly to the uninhabited and inaccessible high mountainous regions. These are the Namsa-Tijit forests in Mon sub-division of Tuensang district, the coniferous forests along the Burma border in the south-east and a few forest patches in the Angami area. In the remaining areas, only the secondary vegetative growth consisting of grasses, reeds and fast growing broad-leaved softwood trees come up gregariously after active cultivation ceases. But repeated clearings have resulted in complete degradation of vegetative cover.

According to a rough estimate, the State has only 17.6 per cent of its total area under permanent forests. Reserved forests constitute only 1.9% and protected forests 3.1%; the remaining 12.6% constitutes village or community forests over which the Forest Department has very little control. A statement showing area under forests and out-turn of forest produce (district-wise—1969-70) as furnished by the Forest Department is given in *Table* 8.

The very small area under reserved and protected forests provides little scope for large scale plantation work. The Government intends to take up a scheme under which it proposes to acquire as much private community forests, as may be available, to have more scope for increasing plantation of economic species which would also have the effect of saving valuable virgin forests liable to be destroyed by jhumming or by excessive felling.

It is not necessary here to review the measures that need to be taken to resuscitate the forest estate, so as to create the potentia for the growth of forest-based industries. The NCAER have made suggestions to this effect in their Techno-Economic Survey of the State. Besides, development of forests is a long-term programme, essentially to be undertaken by the State. However, if a viable programme in concentrated areas could be drawn up, the Agricultural Refinance Corporation could be approached for finance through a Government sponsored autonomous agency. The Team feels that this aspect may have to be studied in connec-

tion with the availability of raw materials for the proposed paper mill, which is discussed later in this chapter.

The State Government in its determination to meet the growing aspirations of people to develop the State industrially, has taken steps to set up a few forest-based industries. However, inadequate planning and lack of effective management have created problems resulting in slowing down the implementation of the projects.

Integrated Wood Seasoning Unit

As timber is liable to develop seasoning defects and is vulnerable to diseases and fungal damage, the Forest Department set up a seasoning and treating plant at Dimapur in 1965-66. It was proposed to establish a saw mill and a joinery later to make it an integrated unit. However, the first step itself proved to be unsuccessful and the seasoning plant was closed down within a year of its establishment. The main reason given for its closure was that the Railways who were an important buyer of sleepers preferred the unseasoned logs, as they had captive facilities for treatment elsewhere in the country. Secondly, the local population was not inclined to use treated timber as it added to the costs. The result is that the plant is now lying idle. It was informed that the State Government is now considering the sale of this plant.

Plywood Unit

A plywood unit is proposed to be set up at Namsa-Tijit-Tekang area of Mon sub-division. The forests in that area are private community forests. The landowners of the area, consisting of 12 villages, have agreed to hand over the management of the forests to the Forest Department for establishing a plywood unit in the area. A private firm, already in this business, will be associated with this venture. Negotiations in this behalf are reported to have been finalised. It has been decided to form a limited company with an authorised share capital of Rs. 50 lakhs and paid-up capital of Rs. 20 lakhs. Fifty per cent of the paid-up capital will be subscribed by the private firm, 10 per cent by the Government of Nagaland and the balance 40 per cent will be issued to the land-owners. Initially the State Government will purchase shares to the extent of Rs. 3 lakhs on behalf of the land-owners. The share money payable by the land-owners in respect of their shares will be recovered from the amounts payable to them for the supply of timber to the company.

The Forest Department has estimated that, in the present circumstances, supply of raw materials to the plywood factory would be around 2,00,000 cu.m., of wood per annum on a sus-

tained basis. The company will be allowed to work in the area according to the working plan drawn up by the Forest Department. In order to fully utilise the timber resources of the area, it would be necessary to build a good network of roads in these areas.

Pulp and Paper Mill Project at Tuli

The State Government have also undertaken a project for establishing a 100 tonnes per day capacity pulp and paper plant at Tuli in Mokokchung district, about 20 kms away from Amguri (Assam), a railhead on the Gauhati-Dibrugarh section of the North-Eastern Railway, utilising locally available fibrous raw materials. For the management of this project, a separate company would be formed under the name of Nagaland Pulp and Paper Corporation Ltd. The paid up share capital would be Rs. 8 crores of which the Hindusthan Paper Corporation Ltd. is expected to contribute Rs. 7 crores and the balance of Rs. one crore would be taken up by the State Government. The work on the project in respect of acquisition of land, site development, construction of residential buildings, etc. has already been started from 1969-70 and is in progress. A background of the project is given below.

Early in the sixties the Government commissioned CELPAC of France to carry out laboratory as well as semi-industrial scale tests on grasses and reeds available in Nagaland to assess their suitability for the production of paper. The results of these investigations revealed that *Bhutang* and *Khagra* grasses available locally are suitable for production of writing and printing grade paper. CELPAC, however, pointed out that though laboratory and semi-industrial scale tests have established the suitability of these raw materials for the production of writing and printing grade paper, it would be desirable that the grass pulp be blended with some other long fibred pulp to give the end product improved strength and other properties. These results have been confirmed by the recent industrial grade tests carried out on grasses in Star Paper Mills, Shaharanpur. CELPAC subsequently prepared a Project Report establishing the suitability of manufacturing paper from grasses. This report was scrutinised by an 'Appraisal Group' constituted by the Government of India. The Group, however, was of the opinion that the tests carried out in France were not sufficiently exhaustive to establish the commercial suitability of these grasses for production of paper. Moreover, it was observed that production of paper from these grasses on a fast paper machine had not been conclusively established by the research work done in France.

In the light of the above, the Group suggested that the proposed factory be planned at 100 tonnes per day pulp capacity having two separate streams of 50 tonnes per day pulp and paper production each, one based on grasses and the other on bamboo. The Group pointed out that such a solution would provide greater operational flexibility and would ensure quality production.

The National Industrial Development Corporation Ltd. (NIDC), New Delhi, were then commissioned by the Hindustan Paper Corporation Ltd. to prepare revised project cost estimates for the proposed plant based on current costs and prices and taking into account the modifications in process parameters suggested by the Appraisal Group.

The NIDC Report (March 1971) presented an analysis of the capital costs, the cost of production and the profitability of the venture so as to enable investment decision to be taken regarding implementation of the project. The NIDC estimated project cost at Rs. 19.72 crores as under :

	Investment in		*Capital Cost*	
(*a*)	Land and Civil works	Rs.	291.90	lakhs
(*b*)	Plant and equipment	Rs.	1405.32	,,
(*c*)	Project costs	Rs.	174.50	,,
(*d*)	Working capital margin	Rs.	100.00	,,
	Total	Rs.	1971.72	,,

In the estimated total cost, the foreign currency requirement is estimated at about Rs. 4.66 crores. The above estimates include the cost of a captive 6 tonnes/day chlorine and caustic soda plant at Rs. 1.30 crores. The NIDC has projected the total capital expenditure on the basis that the construction of the plant would be completed in a period of about three years from the date of firm decision for implementation. The payback period is estimated at 6½ years. The project is estimated to earn a gross return of 9.7 per cent and provide employment to 700 persons. Incidentally, it may be mentioned that the total capital outlay of Rs. 19.72 crores as estimated above is exclusive of the cost of a housing colony which has been estimated by NIDC around Rs. 1.03 crores. The recent increase in import duty from 10% *advalorem* to 30% *advalorem* on paper making machinery and component parts, would also lead to an increase in the cost of the project.

The detailed feasibility report prepared by NIDC is available. It is beyond the competence of the Team to opine on the technical feasibility of the project. However, the following observations may be made :

(*i*) Paper making is a highly capital intensive industry where the pay off on the scale is considerable. The current technical opinion is not in favour of establishing a 100 tonnes/day unit, on grounds of high capital costs per unit of paper produced.*

(*ii*) The project costs are likely to escalate further for reasons beyond the control of project authorities—such as higher cost of imported and indigenous equipment, increased cost of civil construction as a result of increase in cost of building materials, labour, etc.

(*iii*) The cost of raw materials *viz.*, bamboo and grass, has been estimated at Rs. 52 and Rs. 54.5 per tonne respectively at mill site. This appears to be an underestimate. Even the best located pulp and paper mill in relation to raw material availability, *viz.*, West Coast Paper Mills, had to pay Rs. 97.8 per tonne of bamboo delivered at mill site in 1969, including a royalty of Rs. 10 per tonne.

(*iv*) The physical availability of the raw material has been assessed at 43,000 tonnes of bamboo and 2,24,500 tonnes of grass per year. The grass reeds will have to come from the community forests (the degraded jhum lands). It is, therefore, necessary to take immediate steps to involve the local populace with a view to ensuring a sustained delivery. Legal contractual arrangements with the parties concerned have to be made to forestall delay in commissioning the plant when it is ready. Now that the decision to implement the project has been taken, complementary steps to enrich the nearby forests and also the arrangements with the local villagers should be taken without delay.

The above observations are made with one objective in view. The decision to implement the project has already been taken. The first and foremost consideration, therefore, should be how best the cost of the project could be kept at minimum as also the overall cost of production.

On present indications, the capital cost of the project is likely to exceed over Rs. 25 crores. Apart from the share capital of Rs. 8 crores, already arranged, the project authorities will have to make arrangements for additional funds from other sources in-

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* (*a*) UNO : Pulp and Paper Projects in Asia and the Far East—1962 (pp. 147-148).
(*b*) FAO : Wood : World Trends and Prospects—1967.
(*c*) NCAER : Cost Price Structure of Paper—1972.

cluding term-financing institutions. Some of the term-financing institutions do have sufficient expertise in financing paper projects. If the project authorities approach the institutions in the initial stages itself, they would be able to benefit from the expertise available with the institutions.

Mineral-based Industries

The Directorate of Geology and Mining started functioning in the State only from 1968-69. The most important mineral known to occur in Nagaland is coal. Of the several occurrences recorded in the State, coal deposit of Nazira coal field (Borjan Colliery) and the Desoi Valley (Lakhuni coal field in Mokokchung district) are the most important.

The Study Team was informed that the main working seam in the Borjan coal field area has coal reserves of about 35 million tonnes. Occurrences in this seam have been found to be at the depth of 150 metres to 450 metres and the thickness of the seam is reported to be about 4 to 7 metres. Further, exploratory work needs to be done before any decision regarding re-opening of the mines can be taken.

The Directorate of Geology and Mining has a field programme (*i*) to carry out search for asbestos and associated minerals in Kohima and Tuensang districts, (*ii*) to investigate slate occurrences near Noklak and (*iii*) to explore the occurrence of fire clay and plastic clay in the Borjan area.

The Directorate has recently discovered extensive deposits of high grade limestone in the Kiphre and Meluri sub-divisions of Tuensang and Kohima districts. Preliminary work has indicated that the limestone would be suitable for cement manufacture. It is too early to decide on the economic exploitation of these reserves. In view of the scanty knowledge on the mineral resources of the State, the Study Team would not suggest any industries based on minerals.

Small Scale Industries

The overall picture of the existing small-scale and cottage industries is not encouraging. Because of the locational advantages and the availability of power, skills and market, only Dimapur town has made a break-through in industrial development. An industrial estate has already come up at this centre where four small units (steel furniture, structural equipments, bottling and labelling of drugs, and printing press) have started functioning.

There are a few rice and oil mills and two engineering units of a fairly large size. The place holds promises of further development.

The setting up of an industrial estate in Dimapur is a step in the right direction. However, its location at a considerable distance from the town is a major disadvantage in an area where transport facilities have not developed. Industrialists have to incur high costs of transporting the labour from the town to the industrial estate and back. There is a demand that the State should provide accommodation for labour and staff within reasonable distance from the industrial estate. The industrial estate also lacks facilities like banking, telephones, medical facilities, etc.

The Fourth Plan of the State envisages an expenditure of Rs. 66 lakhs in respect of small-scale and village industries. A break-up of this amount under different heads is given in *Table* 9. The emphasis continues to be on training in various crafts. The Government proposes to introduce powerlooms only in 1972-73. In order to promote the sale of handloom, handicrafts and village industries' products and to find suitable marketing channels on all-India basis, the Government proposes to open an emporium in New Delhi during the current Plan period.

In the absence of data on imports into Nagaland, it is not possible to recommend specific small industries based on local markets. But, *prima facie*, there is scope for establishing automobile repairing, tyre retreading, battery charging/assembling and other small-scale engineering units for the manufacture of household goods. Apparently these units can be started only in Dimapur. The other centres are not developed as yet to sustain small industries.

To accelerate the development of small-scale industries, the State Government has to formulate a policy of incentives to be given to these industries. As stated earlier, the Central Government has already decided that transport cost of import of raw material to and export of finished products from the State would be subsidised to the extent of 50%. By another decision, the Central Government would give outright grant to the extent of 10% of the cost of projects. These incentives of the Central Government and those given by the financial institutions for industries in the backward regions would reduce the locational disadvantage of the State. However, such measures should be supplemented by the State's own policy and attitudes to small-scale industries. Many of the States, including some of the developed States, have given concessions including price preference, making available land, power and water at a cheapter rate to small-scale

industries. The Nagaland Government has not so far enunciated its industrial development policy.

In the State there exists a licensing system under which, unlike in the rest of the country, any small establishment including a shop has to obtain licence from the State Government. This system has been adopted to safeguard the interests of the local tribals. But this licence is not recognised as equivalent to registration with Directorate of Industries for the purposes of obtaining quotas of scarce raw materials. The State has no system of registration of small industries.

Under the licensing system outsiders are prevented from starting new units. There may be sound political reasons for the policy, but it has the effect of slowing down the rate of industrial development, as one has to wait till the managerial talents are developed among the local people. The existing system does not prevent effectively the entry of outsiders, as they manage to get licences in the name of the absentee-owners. Perhaps, a better way would be to encourage joint ventures with the participation of local people and outside parties. This may pave the way for training the local people in management techniques.

Cottage Industries

Development of cottage industries essentially lies in adaptation of modern techniques for the production of items of traditional designs and patterns. New techniques must be innovated. It is also important that a market is created for the products.

The promotional efforts of the Industries Department of the Government have been mainly directed towards development of cottage industries through demonstration and training, supply of implements and raw materials and creating a market for the products. The types of cottage industries that have been taken up for this purpose are handloom weaving, handicrafts, sericulture, bee-keeping, etc. The efforts of the Government have yet to make a real impact on the economic activities of the people. The efforts should be intensified not in terms of amount spent or persons trained but in terms of actual output in each sphere.

The State Government proposes to set up an emporium for the marketing of handicrafts. Presently, the scope for direct institutional finance to artisans is very much limited, owing to scattered location and high costs of administering the programme. The real need is to provide market outlet and financial agencies can play very little role in this regard. The burden must be borne by the State Government.

CHAPTER V

CONCLUSIONS

Paucity of reliable data on the material resources of the State makes the task of delineating an industrial programme a diffcult one. At the same time, steps taken by the State Government in identifying key areas in the resource base, in initiating feasibility studies of two potentially viable projects and in preparing the ground work for establishing these two units have made the task less difficult.

The State Government has very rightly assumed the role of promoter-entrepreneur in an area where entrepreneurial talents are hard to find. Additionally, the area is unlikely to develop industrially on the initiative of outside entrepreneurs for obvious reasons. The Government's efforts are all the more laudable as the State suffers from many handicaps to which references have been made in this report, including the paucity of skilled and unskilled labour.

Under these conditions, there is every likelihood of tactical and operational errors being committed through acts of commission and omission arising out of environmental constraints. Both the projects—the sugar mill and the pulp and paper mill—have reached an advanced stage of planning and implementation. These projects, together would involve a capital commitment of about Rs. 30/32 crores of which the State Government is likely to bear only about Rs. 3.50 crores. The prospects of inducing private capital funds are dim, and therefore, it would be necessary to approach term-financing institutions, especially IDBI.

The Team feels that the successful completion of these projects will tax fully the financial, managerial and labour force capabilities of the State and hence it is inadvisable to think of any other major projects at this stage. For Nagaland the strategy of industrial development at present lies in the consolidation of the efforts already started.

Looking to the social and cultural attributes of the population, it will take a long time to man the jobs that would be generated through these projects by the local population. In this context, the forward-looking policy of the State Government in initiating relevant technical training programmes deserves to be commended. Training a tradition bound population for industrial skills is an uphill task. The Study Team hopes, the State Government would find a solution over a period of time.

While the scope for large industries is limited, the possibilities for promoting small and cottage industries do exist, though in a small measure. According to budget estimates, the State Government's gross expenditure is estimated at Rs. 43 crores. Besides, the Central Government incurs expenditure on its own activities within the State on which ready information is not available. It appears that, in all, roughly Rs. 1000 are spent per capita annually in the State. Naturally if one knows the composition of this expenditure, it is possible to carefully plan the production of some items locally on a small-scale basis. The Team could not find this information. As a first step, it is therefore suggested that a meeting of all the purchase officers belonging to different departments be called. This meeting should prepare the list of items, quantity-wise, that the Government is likely to purchase annually. Going through such a list, it may be found that some products can be manufactured or assembled locally at a reasonable cost. The local costs should be compared with those of articles which otherwise would have to be imported inclusive of the transport costs. In many instances, it is observed that there is a substantial element of direct and indirect subsidies in the prices of goods imported from outside. An explicit note of these subsidies would have to be taken before arriving at the decision whether the articles should be imported or locally manufactured.

After identifying the items that could be locally produced, the State should prepare technical feasibility reports and give every assistance to the would-be manufacturers.

Reference to the absence of a clear-cut small-scale industrial development policy on the part of State Government has been made elsewhere in the Report. The Team urges that such a policy should be laid down at the earliest, especially as the units set up in Dimapur area are burdened with complex problems. These problems can be partially solved through granting concessions as is done in other States. In many States, a price preference to local small units is allowed in respect of Government tenders. This facility should be included in the incentive packet.

In principle, licensing of small industries is not necessary. But if political compulsions demand such a measure, the policy should be so administered as to develop the entrepreneurial ability of the local people in collaboration with the outside elements. A rigid adherence to the policy of issuing licences only to the local people may slow down the growth of industrial development. Unfortunately the all-India agencies charged with the responsibility of allocating scarce raw materials to the small units make a distinction between a licence and a registration certificate. The State

Government does not have a registration system, understandably because of the existence of licensing system. However, these subtle distinctions made by the officialdom have adverse effects on the units. The matter should be looked into immediately.

The present state of the local economy does not warrant the setting up of a State Financial Corporation. It is understood that the talks for extending the jurisdiction of Assam Financial Corporation to Nagaland are in progress. As the financial needs of small scale units in Dimapur area have to be met on a priority basis, the decision should be expedited. Alternatively, the commercial banks should shoulder the responsibility of term finance in the State.

Commercial banks will have to play an important role in the State's development. There is considerable deposit potential that could be tapped. Innovative methods need to be devised to make the people banking-minded. Tribals do not have to pay income-tax under the constitutional provisions. So, one of the minor reasons which sometimes hamper the deposit growth is absent in the State. The banks may have to identify viable projects in agriculture, cottage and small industries sectors and give financial guidance to the would-be entrepreneurs.

LIST OF STATISTICAL TABLES

TABLE 1

POPULATION CHARACTERISTICS, 1971

	District	Population	Density per sq. km.	No. of females per '000 males	% of Literacy	No. of towns	No. of villages (1961) Inhabited	Un-inhabited	Urban Population
1.	Kohima	1,74,910	24	804	30.6	2	263	11	33,690
2.	Mokokchung	1,68,671	44	907	38.8	1	285	1	17,381
3.	Tuensang	1,71,980	31	912	12.8	—	266	2	—
	Nagaland	5,15,561	31	872	27.3	3	814	14	51,071

Sources : (i) *Statistical Hand-Book of Nagaland, 1968.*

(ii) *Census of India, 1971, Provisional Population Totals, Series 13.*

TABLE 2

ECONOMIC CLASSIFICATION OF POPULATION, 1971

District	Total Workers	Cultivators	Agricultural labourers	Workers other than cultivators and agricultural labourers	Percentage of cultivators etc. to total workers: Cultivators	Agricultural labourers	Workers other than cultivators and agricultural labourers
Kohima ..	91,320	63,343	1,355	26,622	69.36	1.49	29.15
Mokokchung ..	80,437	59,627	1,907	18,903	74.13	2.37	23.50
Tuensang ..	96,800	87,014	615	9,171	89.89	0.63	9.48
Nagaland ..	268,557	209,984	3,877	54,696	78.19	1.44	20.37

Source : Census of India 1971, Provisional Population Totals, Series 13.

TABLE 3

CO-OPERATIVE SOCIETIES IN NAGALAND (AS ON 31-3-1971)

Type of Society	*Number*
1. Consumer	69
2. Weaving	10
3. Service	43
4. Farming	40
5. Dairy	13
6. Industrial	16
7. Multipurpose	80
8. Marketing	6
9. Fishery	1
10. Student	3
11. Transport	3
12. Wholesale Store	3
13. Cinema	1
14. Petrol Pump	2
15. Distillery	1
16. Apex Bank	1
17. Co-operative Union	1
18. Marketing Consumers' Federation	1
Total	294

TABLE 4

PARTICULARS OF AREA UNDER CULTIVATION (1967-68 TO 1969-70)

(*Hectares*)

	1967-68	*1968-69*	*1969-70*
1. Total area under cultivation	100,060	101,000	101,190
2. Area under paddy cultivation	59,300	59,900	60,200
3. Area under high yielding varieties	60	108	120
4. Area under permanent cultivation			
—Total	21,862	24,842	25,989
—Kohima District	15,426	16,235	16,571
—Mokokchung District	4,465	6,247	6,815
—Tuensang District	1,971	2,360	2,603

Source : Director of Agriculture, Government of Nagaland.

TABLE 5

ESTIMATES OF AREA AND PRODUCTION OF PRINCIPAL CROPS (1967-68 TO 1969-70)

CROP	1967-1968		1968-1969		1969-1970	
	Area (hectares)	*Production (tonnes)*	*Area (hectares)*	*Production (tonnes)*	*Area (hectares)*	*Production (tonnes)*
CEREALS ..	88,900	65,508	89,700	67,861	90,000	68,130
1. Paddy ..	59,300	51,000	59,900	52,880	60,200	53,150
2. Maize ..	9,100	5,697	9,200	5,641	9,200	5,640
3. Other cereals and small millets ..	20,500	8,811	20,600	9,340	20,600	9,340
PULSES ..	3,070	1,283	3,250	1,360	3,250	1,360
4. Gram ..	40	18	40	20	40	20
5. Tur ..	60	38	60	40	60	40
6. Rabi pulses	1,420	568	1,450	580	1,450	580
7. Beans ..	1,550	659	1,700	720	1,700	720
OIL SEEDS ..	1,892	798	1,912	806	1,912	806
8. Sesame ..	600	282	600	282	600	282
9. Rape and Mustard seed	1,280	512	1,300	520	1,300	520
10. Linseed ..	12	4	12	4	12	4
FIBRES ..	430	297	320	200	210	105
11. Cotton ..	100	9	100	9	100	9
12. Jute ..	300	270	200	180	100	90
13. Mesta ..	30	18	20	11	10	6
OTHER CROPS	5,768	49,945	5,818	51,345	5,818	51,345
14. Sugarcane	1,300	36,400	1,350	37,800	1,350	37,800
15. Tobacco ..	28	17	28	17	28	17
16. Potato ..	3,050	12,200	3,050	12,200	3,050	12,200
17. Chillies ..	1,150	656	1,150	656	1,150	656
18. Sweet Potato	240	672	240	672	240	672

Source : Director of Agriculture, Government of Nagaland.

TABLE 6

NUMBER OF REGISTERED SMALL-SCALE AND COTTAGE INDUSTRIES IN NAGALAND (AS ON 31-3-1971)

Nature of industry	Kohima	Mokokchung	Tuensang	Total
1. Food industries (bakery, rice mill, atta chakkies, oil mills, etc.) ..	80	184	25	280
2. Engineering (structural, aluminium furniture, assembling of sewing machine, radio, tyre retreading, handicrafts, etc.)	36	48	9	93
3. Drugs and cosmetics	1	—	—	1
4. Textiles :				
(a) Weaving, garment making etc.	62	7	—	69
(b) Hosiery	1	—	—	1
5. Saw mills	2	—	—	2
6. Soap factories	3	—	—	3
7. Candle making	11	—	—	11
8. Brick fields	—	1	—	1
Total	196	240	34	470

Note : According to the information available with the Industries Directorate of the Government of Nagaland, the functioning units number about 355.
Source : Industries Directorate, Government of Nagaland.

TABLE 7

INDUSTRIAL PROGRAMME FOR NAGALAND SUGGESTED BY *NCAER* FOR THE PERIOD 1966-67 TO 1975-76

(*Rs. lakhs*)

Industry	Fixed Investment	Working Capital	Total Outlay
I. Two sugar mills			
(122 tonnes of sugar/day)	440.0	70.0	510.0
II. Utilisation of cane by-products			
(i) Alcohol refinery	28.0	2.0	30.0
(ii) Acetic acid (10 tonnes/day) ..	37.0	3.0	40.0
(iii) Ethyl acetate (20.3 tonnes/day)	8.5	1.5	10.0
(iv) Candies, rum, cattle feed, wax, etc.	5.5	2.0	7.5
III. Horticultural Industries (1.016 tonnes/year)	27.0	13.0	40.0
IV. Forest-based industries			
(i) Joinery mill	30.0	5.0	35.0
(ii) Paper Pulp (33,000 tonnes/year)	1400.0	100.0	1500.0
(iii) Chipboard & hardboard			
(10.2 tonnes/day)	35.0	5.0	40.0
V. Livestock-based industries	8.0	3.0	11.0
VI. PVC Pipes & fixtures	8.0	2.0	10.0
VII. General Engineering Workshops ..	10.0	2.0	12.0
Total	2037.0	208.5	2245.5

Source : NCAER Report.

TABLE 8

AREA UNDER FORESTS AND OUTTURN OF FOREST PRODUCE, 1969-70

	District	Reserved forests	Protected forests	Total	Unclassed or private forests	Forest produce: Timber Quantity (Cu. M)	Forest produce: Value	Forest produce: Minor forest produce	Forest produce: Total revenue
		(areas in sq. kms.)					(In lakhs of Rs.)		
1.	Kohima ..	283	88	371	2072	12003	2·1	5·5	7·6
2.	Mokokchung	Nil	430	430	—	970	0·7	0·8	1·5
3.	Tuensang ..	24	--	24	—	2775	4·6	1·4	6·0
	Nagaland ..	307	518	825	2072	15748	7·4	7·7	15·1

Source : Government of Nagaland, Forest Department.

TABLE 9

OUTLAYS FOR VARIOUS SCHEMES IN THE COTTAGE AND SMALL INDUSTRIES SECTOR IN NAGALAND UNDER THE 4TH PLAN

	Scheme	Expenditure (Rs. lakhs)
1.	Handlooms and weaving	6·05
2.	Powerlooms	1·00
3.	Handicrafts	2·80
4.	Marketing organisation	5·00
5.	Village industries	2·55
6.	Industrial Estate	5·10
7.	Industrial loans	11·60
8.	Training programmes	1·00
9.	Exhibitions and field publicity	2·98
10.	Emporia	8·50
11.	State-based industry	1·80
12.	Sericulture	6·52
13.	Economic plants (Aromatics, Drugs, Tans, latex bearing etc.) and their utilisation	7·80
14.	District Industries Office, Dimapur	2·00
15.	Animal waste utilisation	1·30
	Total	66·00

Source : Government of Nagaland.

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